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EXAMINER	
LAZARO, DAVID R	

ART UNIT	PAPER NUMBER
2155	11

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/693,682	SLAUGHTER ET AL.	
	Examiner	Art Unit	
	David Lazaro	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 April 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-75* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-75* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the 'Request for Reconsideration' filed 04/02/04, paper #10.

2. Claims 1-75 are pending in this Office Action.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-21, 30-49, 52-69 and 75 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,434,605 by Faulkner et al. (Faulkner) in view of "Behavioural Specification Using XML" by Mckee and Marshall and published by IEEE (M&M).

5. With respect to Claim 1, Faulkner teaches a method for communicating in a distributed computing environment (Col. 1 lines 13-22 and Col. 5 lines 49-58) receiving a first message in a language (Col. 1 lines 31-40) from a first source to be sent to a destination (Col. 1 lines 23-30), wherein the first message is one of an ordered set of messages receivable by a destination and described in a schema (Col. 3 lines 6-12 and Col. 4 lines 58-65), verifying a sequence of the first message in the ordered set of messages receivable by the destination according to the schema (Col. 4 lines 58-65); sending the first message to the destination if the first message is in sequence (Col. 1

lines 41-53); and not sending the first message to the destination if the first message is not in sequence (Col. 3 lines 28-33). Faulkner does not explicitly disclose the language being a data representation language or the schema being a data representation language schema. M&M teaches a language can be a data representation language and a schema can be a data representation language schema (Page 53-54, Section 2 'XML as a solution'), both used in communications in a distributed computing environment (Page 53, Section 1, 'Introduction). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Faulkner and modify it as indicated by M&M such that the method further comprises receiving a first message in a data representation language from a first source to be sent to a destination, wherein the first message is one of an ordered set of messages receivable by a destination and described in a data representation schema, verifying a sequence of the first message in the ordered set of messages receivable by the destination according to the data representation language schema. One would be motivated to have this as there is need for a simple and flexible way to provide and manage services in a distributed computing environment (Page 53, 1st Paragraph of Section 1, and Pages 53-54, Section 2 of M&M).

6. It must be noted that Claims 2-17 are rejected based on the same rationale used in the rejection of Claim 1.

7. With respect to Claim 2, Faulkner in view of M&M teaches all the limitations of Claim 1 and further teaches notifying the first source if the first message is not in sequence (Col. 8 lines 45-59 of Faulkner).

8. With respect to Claim 3, Faulkner in view of M&M teaches all the limitations of Claim 2 and further teaches the first source resending the first message in sequence in response to said notifying (Col. 8 lines 45-59 of Faulkner).

9. With respect to Claim 4, Faulkner in view of M&M teaches all the limitations of Claim 1 and further teaches said receiving a first message, said verifying a sequence, and said sending the first message are performed by a message conductor (Col. 1 lines 41-51 of Faulkner) configured to send messages in sequence to the destination according to the data representation language (Page 53-54, Section 2 'XML as a solution' of M&M) schema (Col. 3 lines 6-12 and Col. 4 lines 58-65 of Faulkner).

10. With respect to Claim 5, Faulkner in view of M&M teaches all the limitations of Claim 4 and further teaches the source is a client in the distributed computing environment and the destination is a service accessible through the distributed computing environment (Col. 3 lines 40-47 and Col. 5 lines 25-48 of Faulkner).

11. With respect to Claim 6, Faulkner in view of M&M teaches all the limitations of Claim 5 and further teaches a client device comprises the message conductor and the client (Col. 3 lines 33-47 of Faulkner).

12. With respect to Claim 7, Faulkner in view of M&M teaches all the limitations of Claim 6 and further teaches the service providing the message conductor to the client device (Col. 2 lines 15-26 of Faulkner) (Page 53, Section 1, 1st Paragraph of M&M).

13. With respect to Claim 8, Faulkner in view of M&M teaches all the limitations of Claim 5 and further teaches a service device comprises the message conductor and the service (Col. 3 lines 33-47 of Faulkner).

14. With respect to Claim 9, Faulkner in view of M&M teaches all the limitations of Claim 1 and further teaches said receiving a first message and said verifying a sequence are performed by a message conductor (Col. 1 lines 41-51 of Faulkner) configured to verify the sequence of messages according to the data representation language (Page 53-54, Section 2 'XML as a solution' of M&M) schema (Col. 3 lines 6-12 and Col. 4 lines 58-65 of Faulkner), and wherein said sending the first message is performed by a message endpoint configured to send messages to the destination (Col. 2 lines 26-30 of Faulkner).

15. With respect to Claim 10, Faulkner in view of M&M teaches all the limitations of Claim 9 and further teaches the message conductor sending the first message to the message endpoint if the first message is in sequence (Col. 2 lines 38-56 of Faulkner).

16. With respect to Claim 11, Faulkner in view of M&M teaches all the limitations of Claim 9 and further teaches the source is a client in the distributed computing environment and the destination is a service accessible through the distributed computing environment (Col. 3 lines 40-47 and Col. 5 lines 25-48 of Faulkner).

17. With respect to Claim 12, Faulkner in view of M&M teaches all the limitations of Claim 11 and further teaches the service providing the message conductor to the client device (Col. 1 lines 13-30 and Col. 2 lines 15-26 of Faulkner) (Page 53, Section 1, 1st Paragraph of M&M).

18. With respect to Claim 13, Faulkner in view of M&M teaches all the limitations of Claim 1 and further teaches further teaches the destination is a service accessible through the distributed computing environment and configured to provide resources to

clients in the distributed computing environment in response to data representation language (Page 53-54, Section 2 'XML as a solution' of M&M) messages received from the clients (Col. 1 lines 13-17 of Faulkner), and wherein the first source is a first client of the service in the distributed computing environment (Col. 3 lines 33-47 of Faulkner).

19. With respect to Claim 14, Faulkner in view of M&M teaches all the limitations of Claim 1 and further teaches receiving a plurality of messages in the data representation language (Page 53-54, Section 2 'XML as a solution' of M&M) from a plurality of sources to be sent to the destination (Col. 5 lines 36-48 of Faulkner), wherein the plurality of messages are each from the ordered set of messages receivable by the destination and described in the data representation language (Page 53-54, Section 2 'XML as a solution' of M&M) schema (Col. 3 lines 6-12 and Col. 4 lines 58-65 of Faulkner); verifying a sequence of the plurality of messages in the ordered set of messages receivable by the destination according to the data representation language (Page 53-54, Section 2 'XML as a solution' of M&M)schema (Col. 3 lines 6-12 and Col. 4 lines 58-65 of Faulkner); sending a second message of the plurality of message to the destination if the second message is in sequence (Col. 1 lines 41-53 of Faulkner); and not sending the second message to the destination if the second message is not in sequence (Col. 3 lines 28-33 of Faulkner).

20. With respect to Claim 15, Faulkner in view of M&M teaches all the limitations of Claim 1 and further teaches the source is a client in the distributed computing environment and the destination is a service accessible through the distributed computing environment (Col. 3 lines 40-47 and Col. 5 lines 25-48 of Faulkner), and the

method further comprising: receiving the data representation language (Page 53-54, Section 2 'XML as a solution' of M&M) schema (Col. 3 lines 6-12 and Col. 4 lines 58-65 of Faulkner), wherein the data representation language(Page 53-54, Section 2 'XML as a solution' of M&M) schema defines a message sequence interface for accessing the service (Col. 3 lines 54-63 of Faulkner); and generating a message conductor for the client according to the data representation language (Page 53-54, Section 2 'XML as a solution' of M&M) schema, wherein said receiving a first message and said verifying a sequence are performed by the message conductor for the client (Col. 3 lines 28-33 of Faulkner).

21. With respect to Claim 16, Faulkner in view of M&M teaches all the limitations of Claim 15 and further teaches receiving the data representation language schema of the service in a service advertisement of the service (Page 58, Section 6 of M&M).

22. With respect to Claim 17, Faulkner in view of M&M teaches all the limitations of Claim 1 and further teaches the data representation language is eXtensible Markup Language (XML) (Page 53-54, Section 2, 'XML as a solution', of M&M).

23. With respect to Claim 18, Faulkner teaches in a method for communicating in a distributed computing environment (Col. 1 lines 13-22 and Col. 5 lines 49-58) receiving a plurality of request messages in a language from a first source to be sent to a destination (Col. 1 lines 23-51), wherein the plurality or request messages are an ordered set of messages receivable by the destination (Col. 3 lines 54-60) and described in a schema (Col. 3 lines 6-12), verifying a sequence of the plurality of request messages receivable by the destination according to the schema (Col. 4 lines

58-65), and sending the plurality of request messages in sequence to the destination (Col. 1 lines 41-53). Faulkner does not explicitly disclose the language being a data representation language or the schema being a data representation language schema. M&M teaches a language can be a data representation language and a schema can be a data representation language schema (Page 53-54, Section 2 'XML as a solution'), both used in communications in a distributed computing environment (Page 53, Section 1, 'Introduction). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Faulkner and modify it as indicated by M&M such that the method further comprises receiving a plurality of request messages in a data representation language from a first source to be sent to a destination, wherein the plurality or request messages are an ordered set of messages receivable by the destination and described in a data representation schema, verifying a sequence of the plurality of request messages receivable by the destination according to the data representation schema. One would be motivated to have this as there is need for a simple and flexible way to provide and manage services in a distributed computing environment (Page 53, 1st Paragraph of Section 1, and Pages 53-54, Section 2 of M&M).

24. It must be noted that Claims 19-30 are rejected based on the same rationale used in the rejection of Claim 18.

25. With respect to Claim 19, Faulkner in view of M&M teaches all the limitations of Claim 18 and further teaches the source is a client in the distributed computing environment and the destination is a service accessible through the distributed

computing environment (Col. 3 lines 40-47 and Col. 5 lines 25-48 of Faulkner), wherein the plurality of request messages include information requesting the service to perform one or more functions on behalf of the client (Page 53, Section 1 "Introduction" 1st paragraph).

26. With respect to Claim 20, Faulkner in view of M&M teaches all the limitations of Claim 19 and further teaches the service performing the one or more functions as specified by the plurality of request messages, wherein said performing the one or more functions generates results data (inherent in Page 53, Section 1 "Introduction" 1st paragraph).

27. With respect to Claim 21, Faulkner in view of M&M teaches all the limitations of Claim 20 and further teaches sending the results data to the client in one or more response messages (inherent in Page 53, Section 1 "Introduction" 1st paragraph) in the data representation language (Page 53, Section 2).

28. With respect to Claim 30, Faulkner in view of M&M teaches all the limitations of Claim 18 and further teaches the data representation language is eXtensible Markup Language (XML) (Page 53-54, Section 2, 'XML as a solution', of M&M).

29. With respect to Claim 31, Faulkner teaches a device, comprising: a processor; a memory coupled to said processor (Col. 5 lines 25-35); a message conductor unit (Col. 3 lines 58-60) configured to: receive a first message in a language (Col. 1 lines 31-40) from a first source to be sent to a destination (Col. 1 lines 23-30), wherein the first message is one of an ordered set of messages receivable by a destination and described in a schema (Col. 3 lines 6-12 and Col. 4 lines 58-65), verify a sequence of

the first message in the ordered set of messages receivable by the destination according to the schema (Col. 4 lines 58-65); send the first message to the destination if the first message is in sequence (Col. 1 lines 41-53); and not send the first message to the destination if the first message is not in sequence (Col. 3 lines 28-33). Faulkner does not explicitly disclose the language being a data representation language or the schema being a data representation language schema. M&M teaches a language can be a data representation language and a schema can be a data representation language schema (Page 53-54, Section 2 'XML as a solution'), both used in communications in a distributed computing environment (Page 53, Section 1, 'Introduction). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the device disclosed by Faulkner and modify it as indicated by M&M such that the device is further configured to receive a first message in a data representation language from a first source to be sent to a destination, wherein the first message is one of an ordered set of messages receivable by a destination and described in a data representation schema, verify a sequence of the first message in the ordered set of messages receivable by the destination according to the data representation language schema. One would be motivated to have this as there is need for a simple and flexible way to provide and manage services in a distributed computing environment (Page 53, 1st Paragraph of Section 1, and Pages 53-54, Section 2 of M&M).

30. It must be noted that Claims 32-45 are rejected based on the same rationale used in the rejection of Claim 31.

31. With respect to Claim 32, Faulkner in view of M&M teaches all the limitations of Claim 31. Claim 32 is further rejected on the similar basis of Claim 2's rejection.

32. With respect to Claim 33, Faulkner in view of M&M teaches all the limitations of Claim 32. Claim 33 is further rejected on the similar basis of Claim 3's rejection.

33. With respect to Claim 34, Faulkner in view of M&M teaches all the limitations of Claim 31. Claim 34 is further is rejected on the similar basis of Claim 5's rejection.

34. With respect to Claim 35, Faulkner in view of M&M teaches all the limitations of Claim 34. Claim 35 is further is rejected on the similar basis of Claim 6's rejection.

35. With respect to Claim 36, Faulkner in view of M&M teaches all the limitations of Claim 35. Claim 36 is further is rejected on the similar basis of Claim 7's rejection.

36. With respect to Claim 37, Faulkner in view of M&M teaches all the limitations of Claim 34. Claim 37 is further is rejected on the similar basis of Claim 8's rejection.

37. With respect to Claim 38, Faulkner in view of M&M teaches all the limitations of Claim 31 and further teaches the device further comprising a message endpoint (Col. 2 lines 26-30 of Faulkner), wherein in said sending the first message to the destination, the message conductor is further configured to send the first message to the message endpoint (Col. 2 lines 26-30 of Faulkner), wherein the message endpoint is configured to send the first message to the destination for the message conductor (Col. 2 lines 26-30 of Faulkner).

38. With respect to Claim 39, Faulkner in view of M&M teaches all the limitations of Claim 38 and further teaches the source is a client process in the distributed computing environment and the destination is a service accessible through the distributed

computing environment (Col. 3 lines 40-47 and Col. 5 lines 25-48 of Faulkner), and wherein the device comprises the message conductor (Col. 2 lines 41-51 of Faulkner), message endpoint (Col. 2 lines 26-38 of Faulkner), and client process (Col. 2 lines 23-30 of Faulkner).

39. With respect to Claim 40, Faulkner in view of M&M teaches all the limitations of Claim 39 and further teaches the service is configured to provide the message conductor to the device (Page 53, Section 1, 1st paragraph).

40. With respect to Claim 41, Faulkner in view of M&M teaches all the limitations of Claim 31. Claim 41 is further rejected on the similar basis of Claim 13's rejection.

41. With respect to Claim 42, Faulkner in view of M&M teaches all the limitations of Claim 31. Claim 42 is further rejected on the similar basis of Claim 14's rejection.

42. With respect to Claim 43, Faulkner in view of M&M teaches all the limitations of Claim 31 and further teaches the source is a client process in the distributed computing environment and the destination is a service accessible through the distributed computing environment (Col. 3 lines 40-47 and Col. 5 lines 25-48 of Faulkner), wherein the device is configured to: receive the data representation language schema (Page 53-54, Section 2 'XML as a solution' of M&M), wherein the data representation language schema defines a message sequence interface for accessing the service (Col. 3 lines 54-63 of Faulkner); and generate a message conductor for the client according to the data representation language schema (Page 54 1st paragraph and sections 3 and 4).

43. With respect to Claim 44, Faulkner in view of M&M teaches all the limitations of Claim 43. Claim 44 is further rejected on the similar basis of Claim 16's rejection.

44. With respect to Claim 45, Faulkner in view of M&M teaches all the limitations of Claim 31. Claim 45 is further rejected on the similar basis of Claim 17's rejection.

45. With respect to Claim 46, Faulkner teaches a device, comprising: a processor; a memory coupled to said processor (Col. 5 lines 25-35); a service interface unit (Col. 2 lines 44-51) configured to: receive a plurality of request messages in a language from a first source to be sent to a destination (Col. 1 lines 23-51), wherein the plurality or request messages are an ordered set of messages receivable by the destination (Col. 3 lines 54-60) and described in a schema (Col. 3 lines 6-12), verify a sequence of the plurality of request messages receivable by the destination according to the schema (Col. 4 lines 58-65), and send the plurality of request messages in sequence to the destination (Col. 1 lines 41-53). Faulkner does not explicitly disclose the language being a data representation language or the schema being a data representation language schema. M&M teaches a language can be a data representation language and a schema can be a data representation language schema (Page 53-54, Section 2 'XML as a solution'), both used in communications in a distributed computing environment (Page 53, Section 1, 'Introduction). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the device disclosed by Faulkner and modify it as indicated by M&M such that the device is further configured to receive a plurality of request messages in a data representation language from a first source to be sent to a destination, wherein the plurality or request messages are an ordered set of messages receivable by the destination and described in a data representation schema, verify a sequence of the plurality of request messages

receivable by the destination according to the data representation schema. One would be motivated to have this as there is need for a simple and flexible way to provide and manage services in a distributed computing environment (Page 53, 1st Paragraph of Section 1, and Pages 53-54, Section 2 of M&M).

46. It must be noted that Claims 47-57 are rejected based on the same rationale used in the rejection of Claim 46.

47. With respect to Claim 47, Faulkner in view of M&M teaches all the limitations of Claim 46. Claim 47 is further rejected on the similar basis of Claim 19's rejection.

48. With respect to Claim 48, Faulkner in view of M&M teaches all the limitations of Claim 47. Claim 48 is further rejected on the similar basis of Claim 20's rejection.

49. With respect to Claim 49, Faulkner in view of M&M teaches all the limitations of Claim 48. Claim 49 is further rejected on the similar basis of Claim 21's rejection.

50. With respect to Claim 52, Faulkner in view of M&M teaches all the limitations of Claim 47 and further teaches the device comprises the service interface and the client process (Page 53, Section 1, 1st Paragraph).

51. With respect to Claim 53, Faulkner in view of M&M teaches all the limitations of Claim 52 and further teaches the service is further configured to provide the service interface to the device (Page 53, Section 1, 1st Paragraph).

52. With respect to Claim 54, Faulkner in view of M&M teaches all the limitations of Claim 47 and further teaches the device comprises the service interface and the service (Page 53, Section 1, 1st Paragraph).

53. With respect to Claim 55, Faulkner in view of M&M teaches all the limitations of Claim 46 and further teaches the device is further configured to receive the data representation language (Page 53-54, Section 2 'XML as a solution' of M&M) schema (Col. 3 lines 6-12 and Col. 4 lines 58-65 of Faulkner); and generating the service interface for the client according to the data representation language schema (Page 53-54, Section 2 'XML as a solution' of M&M)

54. With respect to Claim 56, Faulkner in view of M&M teaches all the limitations of Claim 55 and further teaches the device is further configured to receive the data representation language schema of the service in a service advertisement of the service (Page 58, Section 6, of M&M).

55. With respect to Claim 57, Faulkner in view of M&M teaches all the limitations of Claim 46 and further teaches the data representation language is eXtensible Markup Language (XML) (Page 53-54, Section 2, 'XML as a solution', of M&M).

56. With respect to Claim 58, Faulkner teaches a carrier medium comprising program instructions, wherein the program instructions are computer-executable to implement: receiving a first message in a language (Col. 1 lines 31-40) from a first source to be sent to a destination (Col. 1 lines 23-30), wherein the first message is one of an ordered set of messages receivable by a destination and described in a schema (Col. 3 lines 6-12 and Col. 4 lines 58-65), verifying a sequence of the first message in the ordered set of messages receivable by the destination according to the schema (Col. 4 lines 58-65); sending the first message to the destination if the first message is in sequence (Col. 1 lines 41-53); and not sending the first message to the destination if

the first message is not in sequence (Col. 3 lines 28-33). Faulkner does not explicitly disclose the language being a data representation language or the schema being a data representation language schema. M&M teaches a language can be a data representation language and a schema can be a data representation language schema (Page 53-54, Section 2 'XML as a solution'), both used in communications in a distributed computing environment (Page 53, Section 1, 'Introduction). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the program instructions disclosed by Faulkner and modify them as indicated by M&M such that the instructions further comprise receiving a first message in a data representation language from a first source to be sent to a destination, wherein the first message is one of an ordered set of messages receivable by a destination and described in a data representation schema, verifying a sequence of the first message in the ordered set of messages receivable by the destination according to the data representation language schema. One would be motivated to have this as there is need for a simple and flexible way to provide and manage services in a distributed computing environment (Page 53, 1st Paragraph of Section 1, and Pages 53-54, Section 2 of M&M).

57. It must be noted that Claims 59-66 are rejected based on the same rationale used in the rejection of Claim 58.

58. With respect to Claim 59, Faulkner in view of M&M teaches all the limitations of Claim 58. Claim 59 is further rejected on the similar basis of Claim 2's rejection.

59. With respect to Claim 60, Faulkner in view of M&M teaches all the limitations of Claim 58. Claim 60 is further rejected on the similar basis of Claim 4's rejection.

60. With respect to Claim 61, Faulkner in view of M&M teaches all the limitations of Claim 60 and further teaches the source is a client in the distributed computing environment and the destination is a service accessible through the distributed computing environment (Col. 3 lines 40-47 and Col. 5 lines 25-48 of Faulkner), and wherein a client device comprises the message conductor and the client (Col. 3 lines 33-47 of Faulkner).

61. With respect to Claim 62, Faulkner in view of M&M teaches all the limitations of Claim 60 and further teaches the source is a client in the distributed computing environment and the destination is a service accessible through the distributed computing environment (Col. 3 lines 40-47 and Col. 5 lines 25-48 of Faulkner), and wherein a service device comprises the message conductor and the service (Col. 3 lines 33-47 of Faulkner).

62. With respect to Claim 63, Faulkner in view of M&M teaches all the limitations of Claim 58 and further teaches the source is a client in the distributed computing environment and the destination is a service accessible through the distributed computing environment (Col. 3 lines 40-47 and Col. 5 lines 25-48 of Faulkner) said receiving a first message and said verifying a sequence are performed by a message conductor (Col. 1 lines 41-51 of Faulkner) configured to verify the sequence of messages according to the data representation language (Page 53-54, Section 2 'XML as a solution' of M&M) schema (Col. 3 lines 6-12 and Col. 4 lines 58-65 of Faulkner),

and wherein said sending the first message is performed by a message endpoint configured to send messages to the destination (Col. 2 lines 26-30 of Faulkner).

63. With respect to Claim 64, Faulkner in view of M&M teaches all the limitations of Claim 58. Claim 64 is further rejected on the similar basis of Claim 14's rejection.

64. With respect to Claim 65, Faulkner in view of M&M teaches all the limitations of Claim 58. Claim 65 is further rejected on the similar basis of Claim 15's rejection.

65. With respect to Claim 66, Faulkner in view of M&M teaches all the limitations of Claim 58. Claim 66 is further rejected on the similar basis of Claim 17's rejection.

66. With respect to Claim 67, Faulkner teaches a carrier medium comprising program instructions, wherein the program instructions are computer-executable to implement: receiving a plurality of request messages in a language from a first source to be sent to a destination (Col. 1 lines 23-51), wherein the plurality or request messages are an ordered set of messages receivable by the destination (Col. 3 lines 54-60) and described in a schema (Col. 3 lines 6-12), verifying a sequence of the plurality of request messages receivable by the destination according to the schema (Col. 4 lines 58-65), and sending the plurality of request messages in sequence to the destination (Col. 1 lines 41-53). Faulkner does not explicitly disclose the language being a data representation language or the schema being a data representation language schema. M&M teaches a language can be a data representation language and a schema can be a data representation language schema (Page 53-54, Section 2 'XML as a solution'), both used in communications in a distributed computing environment (Page 53, Section 1, 'Introduction). It would have been obvious to one of ordinary skill in the art at the time

the invention was made to take the program instructions disclosed by Faulkner and modify them as indicated by M&M such that the instructions further comprises receiving a plurality of request messages in a data representation language from a first source to be sent to a destination, wherein the plurality or request messages are an ordered set of messages receivable by the destination and described in a data representation schema, verifying a sequence of the plurality of request messages receivable by the destination according to the data representation schema. One would be motivated to have this as there is need for a simple and flexible way to provide and manage services in a distributed computing environment (Page 53, 1st Paragraph of Section 1, and Pages 53-54, Section 2 of M&M).

67. It must be noted that Claims 68-75 are rejected based on the same rationale used in the rejection of Claim 67.

68. With respect to Claim 68, Faulkner in view of M&M teaches all the limitations of Claim 67. Claim 68 is further rejected on the similar basis of Claim 19's rejection.

69. With respect to Claim 69, Faulkner in view of M&M teaches all the limitations of Claim 68. Claim 69 is further rejected on the similar basis of Claim 20's rejection.

70. With respect to Claim 75, Faulkner in view of M&M teaches all the limitations of Claim 67. Claim 75 is further rejected on the similar basis of Claim 30's rejection.

71. Claims 22 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faulkner in view of M&M as applied to claims 20 above, and further in view of U.S. Patent 6,216,151 by Antoun.

72. With respect to Claim 22, Faulkner in view of M&M teaches all the limitations of Claim 20 but does not explicitly disclose the results being saved and sending a reference to the stored results to the client. However, Antoun teaches that the results of a client request can be stored and later accessed through a reference (Col. 2 lines 19-42). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Faulkner in view of M&M and modify as indicated by Antoun such that the method further comprises storing the results data; and sending a reference to the stored results data to the client in a response message in the data representation language. One would be motivated to have this as it reduces bandwidth consumption as well as memory and processor overhead (Col. 1 line 58 to Col. 2 line 2 of Antoun).

73. With respect to Claim 50, Faulkner in view of M&N teaches all the limitations of Claim 48. Claim 50 is further rejected by Faulkner in view of M&M and in further view of Antoun for the similar reason and motivation as applied in Claim 22's rejection.

74. Claim 23-29, 51 and 70-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faulkner in view of M&M as applied to claims 20 above, and further in view of U.S. Patent 6,646,659 by Brown et al. (Brown).

75. With respect to Claim 23, Faulkner in view of M&M teaches all the limitations of Claim 20 but does not explicitly disclose the results being displayed in accordance with the data representation language schema. However, Brown teaches that a data representation language schema can include display characteristics such that a client can display data in accordance with the schema (Col. 4 lines 42-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to take the method disclosed by Faulkner in view of M&M and modify it as indicated by Brown such that the method further comprises displaying the results data for the client in accordance with the data representation language schema, wherein the data representation language schema further includes information describing display characteristics of the results data. One would be motivated to have this as it allows a client to have results displayed according to their own specific display characteristics (Col. 1 line 66 – Col. 2 line 16 of Brown).

76. With respect to Claim 24, Faulkner in view of M&M and in further view of Brown further teaches said receiving a plurality of request messages, said verifying a sequence of the plurality of request messages, said sending the plurality of request messages, and said displaying the results data are performed by a service interface for the client (Page 54 Section 3 and 1st Paragraph of Section 4 of M&M).

77. With respect to Claim 25, Faulkner in view of M&M and in further view of Brown further teaches a client device comprises the service interface and the client (Page 53, Section 1, 1st Paragraph of M&M).

78. With respect to Claim 26, Faulkner in view of M&M and in further view of Brown further teaches the service providing the service interface to the client device (Page 53, Section 1, 1st Paragraph of M&M).

79. With respect to Claim 27, Faulkner in view of M&M and in further view of Brown further teaches a service device comprises the service interface and the service (Page 53, Section 1, 1st Paragraph of M&M).

80. With respect to Claim 28, Faulkner in view of M&M and in further view of Brown further teaches receiving the data representation language schema; and generating the service interface for the client according to the data representation language schema (Page 53, Section 1, 1st Paragraph, and Page 58, Section 7 of M&M).

81. With respect to Claim 29, Faulkner in view of M&M and in further view of Brown further teaches receiving the data representation language schema of the service in a service advertisement of the service (Page 58, Section 6 of M&M).

82. With respect to Claim 51, Faulkner in view of M&M teaches all the limitations of Claim 48. Claim 51 is further rejected by Faulkner in view of M&M and in further view of Brown for the similar reason and motivation as applied in Claim 23's rejection.

83. With respect to Claim 70, Faulkner in view of M&M teaches all the limitations of Claim 69. Claim 70 is further rejected by Faulkner in view of M&M and in further view of Brown for the similar reason and motivation as applied in Claim 23's rejection.

84. With respect to Claim 71, Faulkner in view of M&M and in further view of Brown further teaches said receiving a plurality of request messages, said verifying a sequence of the plurality of request messages, said sending the plurality of request

messages, and said displaying the results data are performed by a service interface for the client (Page 54 Section 3 and 1st Paragraph of Section 4 of M&M).

85. With respect to Claim 72, Faulkner in view of M&M and in further view of Brown further teaches a client device comprises the service interface and the client (Page 53, Section 1, 1st Paragraph of M&M).

86. With respect to Claim 73, Faulkner in view of M&M and in further view of Brown further teaches a service device comprises the service interface and the service (Page 53, Section 1, 1st Paragraph of M&M).

87. With respect to Claim 74, Faulkner in view of M&M and in further view of Brown further teaches receiving the data representation language (Page 53-54, Section 2 'XML as a solution' of M&M) schema (Col. 3 lines 6-12 and Col. 4 lines 58-65 of Faulkner); and generating the service interface for the client according to the data representation language schema (Page 53, Section 1, 1st Paragraph, and Page 58, Section 7 of M&M).

Response to Arguments

88. Applicant's arguments filed 04/02/04 have been fully considered but they are not persuasive. The examiner believes the Applicant did not interpret the rejection as was intended in terms of how the prior art is being applied. The examiner has clarified the examiner's position and will address those arguments considered pertinent.

89. Applicant argues – "*Applicant can find no reference in M&M regarding the sequence of messages or of describing an ordered set of messages in a data representation schema.*"

a. M&M is not used to teach a sequence of messages or to describe an ordered set of messages, as Faulkner teaches these limitations. Instead, M&M teaches a schema, such as one to describe "what is suppose to happen when the software executes" (Page 54, Section 4), can be a data representation language schema such as a DTD or a XML-Schema (Page 54, Section 2).

90. Applicant Argues – "*Faulkner does not teach verifying a sequence of the first message in the ordered set of message receivable by the destination according to a data representation language schema.*"

b. Faulkner teaches verification (Col. 4 lines 38-65) of a predefined sequence of messages (Col. 3 lines 6-11 and Col. 4 lines 38-65). A predefined sequence can be interpreted as a schema as it is providing a format or description of how the messages should be sent and verified. While not explicitly disclosed as a data representation language schema by Faulkner, M&M is used to teach that a schema can be a data representation language schema.

91. Applicant Argues – "*....the Examiner's proposed modification of Faulkner in view of M&M is contrary to Faulkner's teachings...Modifying Faulkner to no longer use the sequence number tags would prevent the ACSER component from being able to reset*

the embedded sequence number tags as relied upon by Faulkner and hence significantly change a basic principle of the operation of Faulkner's system."

c. The Applicant fails to explain why the modification would no longer use the sequence number tags. The examiner does not note any instance of Faulkner being modified such that it no longer uses sequence number tags. The proposed modification of Faulkner in view of M&M does not state sequence number tags would no longer be used or be excluded.

92. Applicant Argues – "*Faulkner teaches that the notifications are log entries, facsimiles, e-mail message and event telephone calls sent to people 'i.e. administrators, service personnel and the like', not to the source of the out of sequence message".*

d. Faulkner teaches a 'Channel Reset Command' that acts as a notification to the sending end that a sequence error has been detected such that it can correct the sequence numbers (Col. 8 lines 53-59). Therefore Faulkner does teach notifying the source if the message is not in sequence.

93. Applicant Argues – "*Applicants can find no teaching in either Faulkner or M&M regarding a first source resending the first message in response to said notifying."*

e. Claim 3 states "resending the first message in sequence in response to said notifying". Since Faulkner teaches sequence numbers are useful for guaranteed delivery (Col. 8 lines 35-40), it is inherent that a message would be sent in sequence after a notification (Col. 8 lines 58-59). Therefore Faulkner

does teach the first source resending the first message in sequence in response to said notifying.

94. Applicant Argues – "*Applicants can find no teaching of Faulkner regarding a service providing a message conductor to a client device...Applicants can find no teaching in M&M regarding a service providing a message conductor to a client device.*"

f. In regards to Claim 7 and 12, the claimed subject matter can be broadly interpreted as installed client side code is part of the service which also provides the message conductor for the client such that the client can communicate with the service. Faulkner teaches in one embodiment, a service providing a message conductor, a queue manager in Faulkner (Col. 2 lines 18-25), to a client device through installed client side code (Col. 2 lines 15-20) such that the client can communicate with the service. Therefore Faulkner teaches the service providing the message conductor to the client device. M&M further supports this as it states that clients can add new services by services providing the appropriate programming across the network (Page 53, Section 1, 1st Paragraph). Appropriate programming could include a message conductor. Furthermore, Applicant does not provide sufficient argument as Applicant provides no interpretive analysis of the given citations in light of the claimed subject matter and merely gives a statement of the deficiencies of Faulkner and M&M.

Conclusion

95. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

96. Internet Draft "Requirements for XML Messaging" Version 1.0, Release 00, January 2000. Relevant Sections: 1, 2, 4, and 7 Discloses the exchange of XML documents and messages over the Internet and structures regarding reliable messaging and document choreography.

97. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lazaro whose telephone number is 703-305-4868. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 703-308-6662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Lazaro
June 2, 2004

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER